



DEPARTMENT OF THE NAVY  
OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
WASHINGTON, DC 20350-2000

and  
Headquarters, United States Marine Corps  
Washington, DC 20380-1775

16 Jan 94 ND  
16 pages

IN REPLY REFER TO

OPNAVINST 9420.1A  
N6/CMC-C4I  
28 July 1993

**OPNAV INSTRUCTION 9420.1A**

From: Chief of Naval Operations  
Commandant of the Marine Corps

Subj: POSITIONING AND NAVIGATION SYSTEMS ADMINISTRATION AND  
PLANNING

Ref: (a) DoD Directive 4650.5, Positioning and Navigation  
Systems Administration and Planning, 5 Dec 90  
(NOTAL)  
(b) CJCS Master Navigation Plan, (CJCS  
MNP) (MCM-131-92), 11 September 1992 (NOTAL)  
(c) Federal Radionavigation Plan, (FRP) 1992 (DoD  
4650.5/DoT-VNTSC-RSPA-92-2) (NOTAL)  
(d) U.S. Navy/U.S. Marine Corps Positioning/Navigation  
Policy Ser 09/1U500942, 1 Aug 91 (NOTAL)

Encl: (1) Charter of the USN/USMC POS/NAV Executive Committee  
(2) Charter of the USN/USMC POS/NAV Working Group  
(3) Definitions

**1. Purpose**

- a. To provide Navy/Marine Corps administration and planning requirements for implementing reference (a).
- b. To describe the roles of the Navy and Marine Corps in periodic revisions of references (b) and (c).
- c. To assign responsibility to maintain and update reference (d).
- d. To assign responsibilities to Navy and Marine Corps Position/Navigation (POS/NAV) focal points, a United States Navy/United States Marine Corps (USN/USMC) POS/NAV Executive Committee and a USN/USMC POS/NAV Working Group.
- e. To assign, when tasked by the Office of the Secretary of Defense (OSD), responsibility to serve as the U.S.



0579LD0569170

OPNAVINST 9420.1A

2 8 JUL 1993

representative to the North Atlantic Treaty Organization (NATO) Tri-Service Group for Communications and Electronics Equipment (TSGCEE) Sub-Group Four (SG/4).

f. To assign responsibility to coordinate Navy/Marine Corps inputs to Allied Navigational Publication Number One (ANP-1), the NATO Master Navigation Document.

2. Cancellation. OPNAVINST 9420.1.

3. Background. The Department of Defense (DoD) is responsible for developing, testing, evaluating, implementing, operating, and maintaining aids to navigation and user equipment required for national defense and ensuring that military vehicles operating in consonance with civil vehicles have the necessary navigational capabilities.

a. The DoD POS/NAV Executive Committee is the DoD focal point and forum for all DoD POS/NAV matters. It provides overall management supervision and decision processes for DoD POS/NAV matters, including biennial revisions of the FRP. The Executive Committee coordinates and works with the Department of Transportation Navigation Council on the FRP and on the National Airspace Plan.

b. The Joint Chiefs of Staff (JCS) provide guidance to the armed forces regarding preparation of their respective detailed navigational plans. The JCS are aware of operational navigation requirements and capabilities of the Unified and Specified Combatant Commands and the Services, and are responsible for the development, approval, and dissemination of reference (b).

c. There is a requirement to ensure that the Navy and Marine Corps establish consistent and logical procedures for the integration/coordination of POS/NAV requirements. In the past, that requirement has been met on an ad hoc basis, however, the increasing complexity of modern warfare and the emergence of extremely accurate POS/NAV systems, dictate a more structured approach.

4. Scope

a. The provisions of this instruction apply to the Chief of Naval Operations, Commandant of the Marine Corps, Fleet Commanders, and commanders of systems commands hereafter referred to as the Navy and Marine Corps (USN/USMC). The Commandant, U.S.

2 8 JUL 1993

Coast Guard has reviewed this directive and has agreed to provide appropriate Coast Guard representation to the USN/USMC POS/NAV Working Group.

b. For this instruction, POS/NAV includes position determination, point to point tracking, and arrival prediction. It also encompasses techniques, systems, equipment, and operator skills associated therewith. POS/NAV requires determination of position, heading, roll, pitch, velocity, altitude or depth, and time with respect to the operation of ships, submarines, aircraft and landing forces. POS/NAV parameters can be absolute or relative and include determination of rates of change.

c. POS/NAV also includes the systems and equipment used by aircraft, ships and submarines.

#### 5. Action

a. A Navy/Marine Corps focal point for administration, planning, and coordination of POS/NAV requirements is hereby assigned.

b. Responsibility for annual review of reference (b) is hereby assigned. Changes and revisions shall be furnished to the Chairman, JCS and shall contain the following data:

(1) New or revised validated Navy/Marine Corps POS/NAV operational requirements.

(2) New or revised descriptions of POS/NAV systems used by the Navy/Marine Corps.

(3) New or revised discussion of Navy/Marine Corps research and development effort.

(4) New or revised Navy/Marine Corps POS/NAV system architecture.

(5) Accuracy requirements and installation priorities.

c. Biennial review of reference (c) is hereby directed. Changes and revisions shall be consistent with and flow from the CJCS MNP.

28 JUL 1993

6. Responsibilities

- R) a. The Director of Space and Electronic Warfare (N6) shall:
- (1) Serve as the focal point for Navy POS/NAV matters.
  - (2) Serve as the primary Naval member of the DoD POS/NAV Executive Committee established by reference (a).
  - (3) Chair the USN/USMC POS/NAV Executive Committee.
  - (4) Approve and forward Navy/Marine Corps submissions for reference (b) to the Chairman, JCS.
  - (5) Approve and forward Navy/Marine Corps FRP submissions to DoD.
  - (6) Ensure coordination of Navy/Marine Corps development and implementation of programs in action offices of the Office of the Chief of Naval Operations and in the Systems Commands.
- R) b. The Assistant Chief of Staff, Command, Control, Communications and Computer, and Intelligence (C4I) or his designee shall:
- (1) Serve as the focal point for POS/NAV top level matters in the Marine Corps.
  - (2) Serve as the alternate Naval member of the DoD POS/NAV Executive Committee established by reference (a).
  - (3) Designate a representative to the USN/USMC POS/NAV Working Group (enclosure (2)).
- R) c. The Deputy Chief of Naval Operations (Resources, Warfare Requirements and Assessments) (N8); the Deputy Chief of Naval Operations (Plans, Policy and Operations) (N3/N5); the Director of Space and Electronic Warfare (N6); the Director of Test & Evaluation and Technology Requirements (N091); the Assistant Chief of Staff, Command, Control, Communications and Computer, and Intelligence (C4I) Headquarters, U.S. Marine Corps; the Oceanographer of the Navy (N096); Commander in Chief, Atlantic Fleet; Commander in Chief, Pacific Fleet; and Commander in Chief, U.S. Naval Forces, Europe shall:

28 JUL 1993

(1) Ensure that Navy and Marine Corps policy and plans on POS/NAV matters are consistent with USN/USMC requirements.

(2) Confirm USN/USMC POS/NAV requirements and establish priorities.

(3) Review the JCS Master Navigation Plan to ensure that the plan reflects Navy and Marine Corps policies, plans, and requirements.

(4) Review Navy and Marine Corps inputs to the FRP and the CJCS MNP for consistency with fiscal policies and approved budgets.

(5) Designate representatives to the USN/USMC POS/NAV Working Group (enclosure (2)).

d. The Directors, Expeditionary Warfare Division (N85), Surface Warfare Division (N86), Submarine Warfare Division (N87), Air Warfare Division (N88), Special Programs Division (N89), the Deputy Chief of Staff for Aviation (Marine Corps) and the Commanding General, Marine Corps Combat Development Center shall:

(R

(1) Identify Navy and Marine Corps POS/NAV related operational requirements.

(2) Develop and implement Navy and Marine Corps POS/NAV tactics and techniques.

(3) Ensure that USN/USMC POS/NAV programs achieve standardization, interoperability and compatibility for joint and combined operations.

(4) Designate representatives to the USN/USMC POS/NAV Working Group (enclosure (2)).

e. The Commander, Space and Naval Warfare Systems Command shall designate a representative to the USN/USMC POS/NAV Working Group (enclosure (2)).

(A

f. The Superintendent, U.S. Naval Academy shall designate a representative to the USN/USMC POS/NAV Working Group (enclosure (2)).

(A

7. Administration and Planning. Administration and planning procedures are set forth in enclosures (1) and (2).

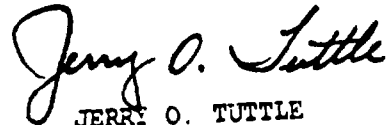
OPNAVINST 9420.1A

28 JUL 1993

a. Definitions. Definitions of selected terms are provided in enclosure (3).



W. P. ESHELMAN  
Director, Marine Corps Staff



JERRY O. TUTTLE  
Director,  
Space and Electronic Warfare

Distribution:  
(See page 7)

28 JUL 1993

Distribution:

SNDL A6 (CMC) (C4I, only)  
B5 (U.S. Coast Guard) (COMDT COGARD Codes G-NP,  
G-NRN, G-NSR, G-RDe, G-T, G-O, only)  
21A (Fleet Commanders in Chief)  
24 (Type Commanders)  
FKA1A (COMNAVAIRSYSCOM)  
FKA1B (COMSPAWARESYSCOM)  
FKA1G (COMNAVSEASYSYSCOM)  
FF38 (USNA)  
N09, N09B, N1, N2, N3/N5, N4, N6, N63, N7, N8, N85, N86, N87,  
N88, N89, N091, and N096

Copy to:

SNDL C25A (OPNAV Support Activity Detachment) (Ft.  
Ritchie, only)

N633 (45)

SECNAV/OPNAV Directives Control Office  
Washington Navy Yard, Bldg. 200  
Washington, DC 20374-5074 (15 copies)

Commandant of the Marine Corps  
2 Navy Annex, Rm 1309  
Washington, DC 20380-1775 (19 copies)

Stocked:

Navy Aviation Supply Office  
ASO Code 103  
5801 Tabor Avenue  
Philadelphia, PA 19120-5099 (25 copies)

28 JUL 1993

CHARTER OF THE USN/USMC POS/NAV EXECUTIVE COMMITTEE1. Executive Committee:

The USN/USMC POS/NAV Executive Committee will meet at the call of the chair. The Executive Committee shall consist of one member and an alternate from the following offices:

- a. Director of Space and Electronic Warfare (N6) (Chair) (R)
- b. Director, Navy Space Systems Division (N63) (Executive Secretary) (R)
- c. Assistant Chief of Staff, Command, Control, Communications and Computer, and Intelligence (C4I) Department, Headquarters, U.S. Marine Corps (R)
- d. Deputy Chief of Naval Operations (Plans, Policy and Operations) (N3/N5) (R)
- e. Deputy Chief of Naval Operations (Resources, Warfare Requirements and Assessments) (N8) (R)
- f. Director of Test & Evaluation and Technology Requirements (N091) (R)
- g. Oceanographer of the Navy (N096) (R)
- h. Commander in Chief, U.S. Atlantic Fleet (A)
- i. Commander in Chief, U.S. Pacific Fleet (A)
- j. Commander in Chief, U.S. Naval Forces, Europe (A)

2. The committee has the authority and responsibility to:

- a. Provide the Navy/Marine Corps forum for review, discussion, and recommendations for resolution of all Navy and Marine Corps POS/NAV Matters.
- b. Review POS/NAV policy to ensure it is appropriate, timely, and effective.
- c. Review established and developing systems and recommend improved Navy and Marine Corps POS/NAV tactics and techniques.

Enclosure (1)



28 JUL 1993

- d. Identify POS/NAV-related operational requirements.
- e. Ensure that POS/NAV programs achieve standardization, interoperability, and compatibility in fulfilling common requirements for the greatest utility in joint operations for NATO and other allied use.
- f. Review procedures relating to Navy/Marine Corps POS/NAV security, cooperation, funding matters, release of information, and recommend procurement of common equipment, where cost-effective.
- g. Review stated intelligence requirements that relate to Navy/Marine Corps POS/NAV and, in coordination with the Director of Naval Intelligence (DNI), make recommendations to DoD, the Defense Intelligence Agency (DIA), and the National Security Agency (NSA) for remedying deficiencies.
- h. Coordinate the preparation of and review proposed Navy/Marine Corps changes and revisions to the FRP and the CJCS MNP.
- i. Be responsive to requests and assignments to assist the committee chair in responding to NATO, JCS, OSD, the Office of Management and Budget (OMB), the General Accounting Office (GAO) or other requests for USN/USMC POS/NAV system information.
- j. Task the USN/USMC POS/NAV Working Group to provide analyses and recommendations and to keep the committee informed of POS/NAV activities within the purview of working group members.

2 8 JUL 1993

CHARTER OF THE USN/USMC POS/NAV WORKING GROUP

1. The USN/USMC POS/NAV Working Group will meet at the call of the Chair. The Working Group shall consist of the following members:

- a. Director, Navy Space Systems Division (N63) (Chair) (R)
- b. Head, Navigation and Surveillance Branch (N633) (R)  
(Executive Secretary)
- One member designated by the following offices/agencies:
- c. Deputy Chief of Naval Operations (Plans, Policy and Operations) (N3/N5) (R)
- d. Deputy Chief of Naval Operations (Resources, Warfare Requirements and Assessments) (N8) (R)
- e. Director, Expeditionary Warfare Division (N85) (A)
- f. Director, Surface Warfare Division (N86) (R)
- g. Director, Submarine Warfare Division (N87) (R)
- h. Director, Air Warfare Division (N88) (R)
- i. Director, Special Programs Division (N89) (A)
- j. Director of Test & Evaluation and Technology Requirements (N091) (R)
- k. Oceanographer of the Navy (N096) (R)
- l. Headquarters, U.S. Marine Corps (CSBI) (R)
- m. Headquarters, U.S. Marine Corps (APW) (A)
- n. Commander in Chief, U.S. Atlantic Fleet (A)
- o. Commander in Chief, U.S. Pacific Fleet (A)
- p. Commander in Chief, U.S. Naval Forces, Europe (A)
- q. Marine Corps Combat Development Command (C442) (R)

Enclosure (2)

28 JUL 1993

- R) r. Space and Naval Warfare Systems Command (PMW-167)
- s. U.S. Coast Guard (Code G-NRN)
- A) t. U.S. Naval Academy (Seamanship and Navigation Department)

2. The Working Group has the authority and responsibility to:

a. Support the USN/USMC POS/NAV Executive Committee by identifying, assessing, and recommending measures to ensure that POS/NAV policies, concepts, plans, and capabilities are effective in obtaining the best possible integrated performance from systems available to the user.

b. Review tactical navigation doctrine and standard positioning convention (i.e., grid navigation vs. true navigation) provided in the Naval Warfare Publications (NWP).

c. Provide functional guidance concerning POS/NAV programs and areas where special POS/NAV emphasis is required, coordinating with appropriate office of the Chief of Naval Operations (OPNAV) program sponsors.

d. Monitor U.S. and friendly foreign national development and acquisition programs that address POS/NAV improvements in operational capability.

e. Provide recommendations to OPNAV program sponsors and to the USN/USMC Executive Committee to ensure that POS/NAV plans are effective, mutually supporting, and non-interfering.

f. Review intelligence requirements that relate to POS/NAV, identifying inadequacies, and recommend means for remedying those inadequacies.

g. Using guidance set forth by the USN/USMC POS/NAV Executive Committee, provide inputs to update the CJCS MNP (reference (b)). Ensure that inputs are consistent with the Department of the Navy budget submittal.

h. Draft Navy/Marine Corps inputs to the FRP (reference (c)). Ensure that inputs are consistent with the CJCS MNP.

i. Provide inputs, as requested, to USN and USMC representatives to NATO Committees or Working Groups.

28 JUL 1993

3. The Chair, USN/USMC POS/NAV Working Group shall accept tasks from the Chair of the USN/USMC POS/NAV Executive Committee.

4. The Executive Secretary, USN/USMC POS/NAV Working Group shall:

a. Serve as the focal point for POS/NAV requirements to be considered by the Working Group as directed by paragraph 2. above.

b. When directed by OSD, serve as the U.S. representative to the NATO Tri-Service Group for Communications and Electronics Equipment (TSGCEE) Sub-Group Four (SG/4).

c. When requested, coordinate Navy/Marine Corps inputs to ANP-1.

5. Members of the USN/USMC POS/NAV Working Group shall provide support in their specific areas of expertise in meeting commitments of the Working Group.

20 JUL 1993

### DEFINITIONS

1. Federal Radionavigation Plan. Describes the federal, interagency approach to the planning, implementation, and operation of common-user radionavigation systems. The document identifies areas of authority and responsibility, and provides a summary of the policies and management structures by which the individual operating agencies define requirements and select systems to meet requirements.
2. CJCS Master Navigation Plan. The official DoD navigation system document which explains the relationship between validated operational requirements and current or developmental navigation systems.
3. Navigation. The process of planning, recording, and controlling the movement of personnel and/or platforms from one place to another.
4. Navigation System. A system capable of being used primarily for navigation. It includes the equipment, its operators, and the rules and procedures governing their actions.
5. Celestial Navigation. The determination of position or the acquisition of information relating to position by using information obtained from celestial bodies.
6. Correlation Navigation. The process of determining a position by means of computer correlation of precisely referenced earth information, e.g. terrain contour matching, digital scene matching.
7. Dead Reckoning. The determination of position by advancing a known position for courses and distances.
8. Inertial Navigation. The process of measuring a craft's velocity, attitude, and displacement from a known starting point through sensing the accelerations acting on it in known directions by means of devices that mechanize Newton's laws of motion.
9. Radar Navigation. Determination of position or acquisition of information relating to position by means of radar.

Enclosure (3)

OPNAVINST 9420.1A

2 3 11 103

10. Radionavigation. The determination of position or the acquisition of information relating to position by means of the propagation properties of radio waves.

11. Positioning. The process of determining the precise physical location of a vehicle, person, or site.